

Application Serial No: 10/509,463
Responsive to the Office Action mailed on: April 1, 2008

REMARKS

This Amendment is in response to the Office Action mailed on April 1, 2008. Claim 5 is amended editorially and is supported, for example, in the specification at page 4, line 20-page 5, line 4 and in Figure 1. Claims 10 and 11 are new. Claim 10 is new and is merely a product by process claim. Claim 11 is new and is supported, for example, in the specification at page 8, lines 4-7. Claims 1-4 and 6 are cancelled without prejudice or disclaimer. No new matter is added. Claims 5 and 7-11 are pending.

Examiner Interview:

Applicants thank the Examiner, Mr. Michael Wieczorek and supervising Examiner, Vickie Kim, for the telephonic interview that took place on May 22, 2008. Applicants note that the Applicants' representatives listed in the Interview Summary should be clarified as Bryan A. Wong and not Douglas P. Mueller participated in the May 22, 2008 interview. In the interview, Applicants' representatives requested clarification of the indefiniteness rejection to claim 9, in which the claim is designated as an omnibus claim. The Examiners noted that the designation of claim 9 as an omnibus claim is incorrect, but there remains an indefiniteness issue as to the term "substantially" in claim 9. The Examiners noted that this rejection would be overcome by removing the term "substantially" or by pointing out where in the specification the bounds of the term are defined.

Applicants' representatives also provided proposed amendments to claim 5 and noted how the prior art references do not disclose or suggest the amended features. The Examiners noted, with respect to the Ohseto reference, that column 5, lines 27-30 of the reference disclose the use of an electron beam evaporation method. The Examiners also noted that a further search of the prior art would be necessary before determining whether the amended claim 5 is allowable and requested that the distinctions noted by the Applicants' representatives be submitted in a formal response to the current Office Action.

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§112. Second Paragraph:

Claims 6 and 9 are rejected as being indefinite. Claim 6 is cancelled without prejudice or disclaimer. As discussed above, the term "substantially" in Claim 9 is rejected as being indefinite. Applicants refer to page 5, lines 5-15 of the specification where the phrase "substantially on the same plane" is met when so that the electron beam 45 passes through a vapor stream of the second thin film material from the resistance heating evaporation source 48. This arrangement makes it easier to allow the electron beam 45 to pass through a vapor stream of the first thin film material and a vapor stream of the second thin film material. Accordingly, the term "substantially" is definite as its bounds are defined in the specification. Withdrawal of these rejections is requested.

§102 Rejections:

Claim 5 is rejected as being anticipated by Aoki (US Patent No. 4,662,312).
Claims 5 and 7 are rejected as being anticipated by Yano (US Patent No. 6,863,996).
Claims 5 and 8 are rejected as being anticipated by Ohseto (US Patent No. 4,720,436).
These rejections are traversed.

Claim 5 is directed to an apparatus for manufacturing a thin film in which the thin film is formed on a supporting base that requires, among other features, an electron beam evaporation source, an electron beam source and a resistance heating evaporation source that are arranged such that a path along which an electron beam emitted from the electron beam source reaches the electron beam evaporation source intersects with a line segment connecting the resistance heating evaporation source with the surface to be vapor-deposited.

Neither Aoki, Yano nor Ohseto disclose or teach or suggest these features. Aoki is directed to an apparatus for ion and vapor deposition with an evaporation source. The rejection asserts that claims 8 and 9 of the Aoki disclose an apparatus comprising both an electron beam evaporation source and a resistance heating evaporation source. However, Aoki discloses the use of a single evaporation source (5) that could be either an electron beam evaporation source or a resistance heating evaporation source. Nowhere does Aoki disclose or suggest using two evaporation sources (5) in which one is an electron beam evaporation source and the other is a resistance heating evaporation source. Accordingly,

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Aoki also cannot disclose or suggest an electron beam evaporation source, an electron beam source and a resistance heating evaporation source that are arranged such that a path along which an electron beam emitted from the electron beam source reaches the electron beam evaporation source intersects with a line segment connecting the resistance heating evaporation source with the surface to be vapor-deposited. For at least these reasons claim 5 is not disclosed by Aoki and should be allowed.

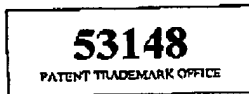
Yano is directed to a fluorescent thin film and its fabrication process using an apparatus containing a K-cell (14), interpreted in the rejection as a resistance heating evaporation source, an EB evaporation source (15), and an electron gun (51). However, nowhere does Yano disclose or suggest that the K-cell (14), the EB evaporation source (15) and the electron gun (51) are arranged such that a path along which an electron beam emitted from the electron gun (51) reaches the EB evaporation source (15) intersects with a line segment connecting the K-cell (14) with the surface to be vapor-deposited. In contrast, Yano only discloses and suggests that the electron gun (51) is arranged to be in-between the EB evaporation source (15) and the K-cell (14) (see Figure 1). For at least these reasons claim 5 is not disclosed by Yano and should be allowed. Claim 7 depends from claim 5 and should be allowed for at least the same reasons described above.

Ohseto is directed to an electroluminescence thin film with an insulating layer (13) formed by an electron beam evaporation method and an emitting layer (14) formed by a coevaporation method using the apparatus of Figure 1 (see column 5, lines 27-33). The apparatus of Figure 1, however, only uses a plurality of resistance-heating type evaporation cells (1-3). Nowhere does Ohseto disclose or suggest that the apparatus of Figure 1 also includes an electron beam evaporation source. Accordingly, Ohseto also cannot disclose or suggest an electron beam evaporation source, an electron beam source and a resistance heating evaporation source that are arranged such that a path along which an electron beam emitted from the electron beam source reaches the electron beam evaporation source intersects with a line segment connecting the resistance heating evaporation source with the surface to be vapor-deposited, as required by claim 1. For at least these reasons claim 5 is not disclosed by Yano and should be allowed.

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Conclusion:

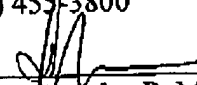
Applicants respectfully assert that claims 5 and 7-11 are in condition for allowance. If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicants' primary attorney-of record, Douglas P. Mueller (Reg. No. 30,300), at (612) 455-3804.



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Respectfully submitted,

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